

Claims

[1] A method for a preamble-based bandwidth request, which is a preamble-based bandwidth request method for a wireless portable Internet system, the method comprising:

- (a) receiving a bandwidth request code from a subscriber station;
- (b) transmitting state control (timing and power offset adjustment) information based on a channel state to the subscriber station; and
- (c) allocating an uplink resource for transmission of a bandwidth request message to the subscriber station.

[2] The method as claimed in claim 1, wherein the step (b) includes transmitting the state control information using a response message.

[3] The method as claimed in claim 2, wherein the response message includes information for discrimination of a subscriber station which transmitted the bandwidth request code.

[4] The method as claimed in claim 3, wherein the information for discrimination of the subscriber station includes at least one of a frame number, a slot number, a sub-channel number, and a code number.

[5] The method as claimed in claim 4, wherein the step (c) includes allocating the uplink resource for transmission of the bandwidth request message to the subscriber station using the information for discrimination of the subscriber station.

[6] The method as claimed in any one of claims 2 to 5, wherein the response message includes a ranging response message.

[7] The method as claimed in claim 2, wherein the step (b) includes allocating a temporary connection identifier to the subscriber station which transmitted the bandwidth request code, and transmitting the allocated temporary connection identifier using the response message.

[8] The method as claimed in claim 7, wherein the step (c) includes allocating the uplink resource for transmission of the bandwidth request message to the subscriber station using the temporary connection identifier transmitted in the step (b).

[9] A method for a preamble-based bandwidth request, which is a preamble-based bandwidth request method for a wireless portable Internet system, the method comprising:

- (a) transmitting a bandwidth request code to a base station;

(b) receiving channel state control information from the base station in response to the bandwidth request code, and controlling the state of a subscriber station based on the channel state control information;

(c) receiving an uplink resource allocated for transmission of a bandwidth request message from the base station; and

(d) performing modulation and channel coding based on channel state information received from the base station, and transmitting uplink data using the bandwidth request message.

[10] The method as claimed in claim 9, wherein the step (b) includes receiving a temporary connection identifier allocated together with the state control information from the base station.

[11] The method as claimed in claim 10, wherein the step (c) includes receiving the allocated uplink resource using the temporary connection identifier received in the step (b).

[12] The method as claimed in any one of claims 9 to 11, wherein the step (b) includes controlling at least one of timing, power, and frequency as the state of the subscriber station.